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Document Name: SAE J826: Devices for Use in Defining and Measuring Vehicle Seating Accommodations

CFR Section(s): 49 CFR 571.3(b)

Standards Body: Society of Automotive Engineers

Official Incorporator:
The Executive Director
OFFICE OF THE FEDERAL REGISTER
WASHINGTON, D.C.

MANIKINS FOR USE IN DEFINING VEHICLE SEATING ACCOMMODATION—SAE J826

SAE Standard

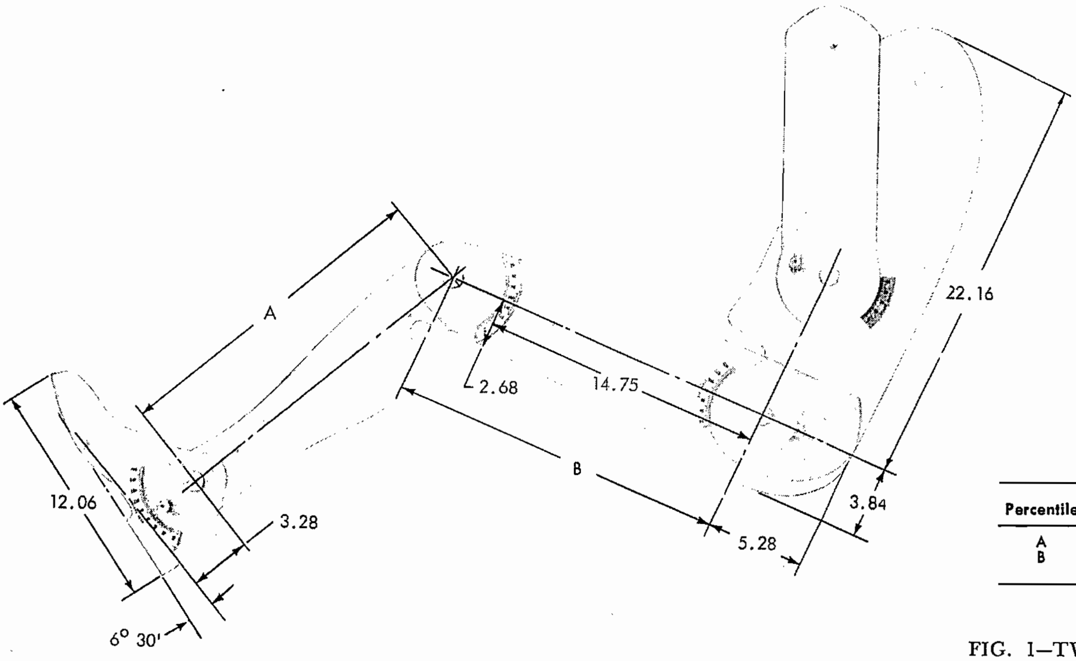
Report of Body Engineering Committee approved November 1962.

Scope—This SAE Standard has been prepared to provide universal two and three dimensional manikins for use in defining vehicle seating accommodation. This standard is designed to be used in the accommodation method of interior compartment dimensioning which utilizes the manikin, rather than the free seat contours, to define seating space in a vehicle. The standard is thus limited to vehicle applications concerning seated occupants.

This standard defines both the two dimensional and three dimensional manikins. Additional detailed specifications and full scale drawings of the manikins may be obtained from SAE, by ordering Drawings Supplementary to SAE J826.

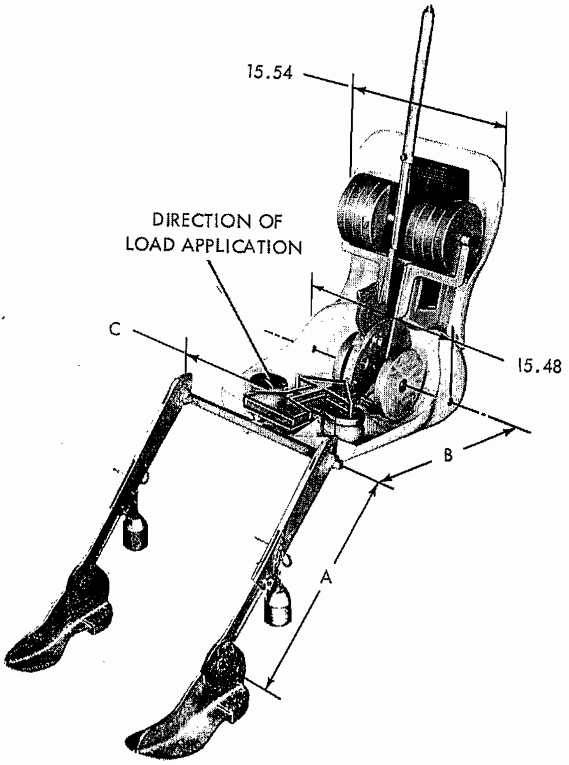
Purpose—The TWO DIMENSIONAL MANIKIN is a DRAFTING tool which:

1. Establishes seating compartment space and occupant attitudes during the conceptual, engineering, and development stages of any new vehicle.
2. Measures interior compartment space and occupant attitudes for



Percentile	10th	50th	90th
A	15.37	16.42	17.46
B	16.05	16.99	17.94

FIG. 1—TWO DIMENSIONAL MANIKIN



Percentile	10th	50th	90th
A	15.37	16.42	17.46
B	16.05	16.99	17.94
C	VARIABLE FROM 4.25 TO 16.68		

FIG. 2—THREE DIMENSIONAL MANIKIN

Candlepower values shall be recorded at 1 deg intervals for all points within the angles bounded by 3U, 4D, 12L, and 12R, except that in the cases of beams which are symmetrical laterally, the complete distribution may be recorded for the left half only.

The beam from the lamp should meet the photometric specifications listed in the table when it is aimed to center the maximum intensity on the photometer axis, except that when the maximum exceeds 25,000 cp, the 25,000 cp point directly above the maximum intensity should be aimed at the photometer axis.

The maximum anywhere not lower than 1 D should be 50,000 cp.

An aiming tolerance of ± ¼ deg should be allowed for manufacturing variations. An additional tolerance of ±20% shall be allowed for 12-v filaments.

Position, deg	Max cp	Position, deg	Min cp
3U—3L to 3R	3,000	H—3L to 3R	7,500
2U—3L to 3R	5,000	1D—6L to 6R	2,500
1U—3L to 3R	8,000	2D—6L to 6R	1,500
H—V	25,000	H—V	15,000

Out-of-Focus Tests on Unsealed Units—Similar tests shall be made for each of four out-of-focus filament positions, except that the complete distribution may be omitted. Where conventional bulbs with two-pin bayonet bases are used, candlepower tests shall be made with the light source 0.060 in. above, below, ahead, and behind the designed position. If prefocused bulbs are used, the limiting positions at which tests are made shall be 0.020 in. above, below, ahead, and behind the designed position.

The beam from each lamp may be reaimed in accordance with above instructions for each of the out-of-focus positions of light source.

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